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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/813,027

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Boris Ginzburg

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EXAMINER

WU, JIANYE

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/813,027	<b>Applicant(s)</b> GINZBURG ET AL.	
	<b>Examiner</b> Jianye Wu	<b>Art Unit</b> 2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 44-81 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 44-81 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/30/08</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/03/08 has been entered.

### ***Response to Arguments***

2. Applicant's arguments filed 7/03/08 have been fully considered but are moot because all independent claims have been amended.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**Claims 44-81** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

**Claims 44, 50, 72** recite the limitation "dividing a frequency bandwidth of a **downlink** channel into a plurality of **uplink** sub-channels". There is insufficient support in the specification for this limitation in the claim.

**Claims 53, 56, 59, 78** recite the limitation "a channel divider for dividing a frequency bandwidth of a **downlink** channel into a plurality of uplink sub-channels". There is insufficient support in the specification for this limitation in the claim.

**Claims 62, 64, 66, 68, 70,** recite the limitation "receiving an allocation of an uplink sub-channel from a plurality of uplink sub-channels wherein said plurality of uplink sub-channels are a frequency bandwidth division of a downlink channel". There is insufficient support in the specification for this limitation in the claim.

All dependent claims are rejected because they depend from independent claims above.

For purpose of continuation of the prosecution, the claims will be interpreted as the best understood.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 44-58 and 62-81** are rejected under 35 U.S.C. 102(e) as being anticipated by Bing et al. (US, 20040131084 A1, hereinafter Bing).

As to **claim 44, 50, 53 and 56**, Bing discloses a method, a processor-readable storage medium, a wireless device and a processor for transmitting between a wireless device and a plurality of stations, comprising:

dividing a frequency bandwidth of a downlink channel ("downlink DL from the base station BS to the subscriber terminals MT1, MT2, MT3", [0037 in view of FIG. 1 and 9) into a plurality of uplink sub-channels (OFDM, [0020], line 11; by definition Orthogonal Frequency Division Multiplexing, OFDM dividing frequency bandwidth of a channel into sub channels);

allocating an uplink sub-channel (subcarriers, [0020], line 12) from said plurality of uplink sub-channels to each station of the plurality of stations; transmitting said allocation of said sub-channel the station allocated thereto ([0020], line 10-17);

transmitting a multicast ("a Multicast connection", [0037]) transmission to the plurality of stations over said downlink channel ("the downlink DL from the base station BS to the subscriber terminals MT1, MT2, MT3", [0037]); and

receiving an acknowledgement (ACK or NAK, [0045] in view of FIG. 9) from a station over said sub-channel allocated thereto.

As to **claim 45, 51, 54 and 57**, Bing discloses the method, the processor-readable storage medium and the wireless device of claim 44, 50 and 53, further

comprising: retransmitting said multicast transmission if an acknowledgment (ACKs, FIG. 9) of said multicast transmission is not received from all of the plurality of stations (transmitted again, [0046], line 3).

As to **claim 46, 52, 55 and 58**, Bing discloses the method, the processor-readable storage medium and the wireless device of claim 44, 50 and 53, further comprising:

assigning a group to at least one of the plurality of stations (a multicast is always associated with a group); and

transmitting said group assignment to said at least one of said plurality of stations (FIG. 7 and [0046]).

As to **claim 47**, Bing discloses the method of Claim 46, wherein said assignment is based on a received signal strength (transmission quality, [0046]) of said at least one of the plurality of stations.

As to **claim 48**, Bing discloses the method of Claim 46, wherein said assignment is based on a dynamic range (distance and location of MTs to BS as shown in FIG. 8 and [0046]) of a receiver of said at least one of the plurality of stations.

As to **claim 49**, Bing discloses the method of Claim 46, wherein said transmitting of said multicast transmission is to all stations assigned to said group (The terminals MT1, MT2 and MT3 are in a group as shown in FIG. 8 and [0046]).

For **claims 62, 64, 66, 68 and 70**, Bing discloses a method, a processor-readable storage medium, a station and a processor for transmitting between a wireless device and a plurality of stations, comprising:

receiving an allocation of a uplink sub-channel from a plurality of uplink sub-channels (OFDM, [0020], line 11; by definition Orthogonal Frequency Division Multiplexing, OFDM dividing frequency bandwidth of a channel into sub channels), wherein said plurality of uplink sub-channels are a frequency bandwidth division (OFDM, [0020]) of a downlink channel ("downlink DL from the base station BS to the subscriber terminals MT1, MT2, MT3", [0037 in view of FIG. 1 and 9);

receiving a multicast transmission ("a Multicast connection", [0037]) from the wireless device over said uplink sub-channel (FIG. 9) and

transmitting to the wireless device an acknowledgment over said uplink sub-channel allocated to the station (ACKs, FIG. 9).

As to **claims 63, 65, 67, 69 and 71**, Bing discloses a method, a processor-readable storage medium, a station and a processor of claim 62, 64, 68 and 70, further comprising:

requesting membership in a group (MT 1,2,3, FIG. 9) comprising at least one station (MT 1,2,3, FIG. 9); and

transmitting said group membership request to the wireless device (FIG. 9).

For **claim 72 and 78**, they are a combination of claims 44 and 62, and 53 and 66, respectively, therefore are reject for the same reasons explained above.

As to **claim 73 and 79**, Bing discloses a method of claim 72 and a wireless device system of claim 78, respectively, wherein said transmitter of said wireless device is for retransmitting said multicast transmission if an acknowledgment of said multicast

transmission is not received from all of said plurality of stations (transmitted again from the base station, [0037], particularly line 3).

As to **claim 74** and **80**, Bing discloses a method of claim 72 and a wireless device system of claim 78, wherein said wireless device further comprises an assignor (inherent from multicast group, FIG. 1) for assigning a group to at least one of said plurality of stations (MT2, MT2 and MT3, [0046], line 7-12), and wherein said transmitter is for transmitting said group assignment to said at least one of said plurality of stations.

As to **claim 75**, Bing discloses the method of claim 74, wherein said assignment is based on a received signal strength (transmission quality, [0046]) of said at least one of the plurality of stations.

As to **claim 76**, Bing discloses the method of claim 74, wherein said assignment is based on a dynamic range (distance and location of MTs to BS as shown in FIG. 8 and [0046]) of a receiver of said at least one of the plurality of stations.

As to **claim 77**, Bing discloses the method of Claim 74, wherein said transmitting of said multicast transmission by the wireless device is to all stations assigned to said group (multicast, [0037], last 2 lines).

As to **claim 81**, Bing discloses the wireless communication system of Claim 78, wherein said at least of said plurality of station further comprises a requestor for requesting membership in a group comprising at least one station (inherent from multicast group, FIG. 1); and wherein said transmitter is for transmitting said group membership request to said wireless device.



5. The **following** is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. **Claims 59-61** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bing as applied to claim 20 above, and further in view of Kapoor et al (US 6795424, hereinafter Kapoor).

For **claim 59**, it is the wireless device of claim 53, further comprising a dipole antenna operably connected to said transmitter and said receiver. Bing discloses the wireless device of claim 53, but **is silent on** the dipole antenna.

In the same field of endeavor, Kapoor discloses a dipole antenna (Col. 17, line 34) connected to said transmitter and said receiver.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Bing by Kapoor to connect a dipole antenna to said

transmitter and said receiver of the wireless device in order to reduce cost (Kapoor Col. 17, line 43).

As to **claim 60**, Bing and Kapoor disclose the wireless device of Claim 59, wherein said transmitter is for retransmitting said multicast transmission if an acknowledgment of said multicast transmission is not received from all of said plurality of stations ([0046]).

As to **claim 61**, Bing and Kapoor disclose the wireless device of Claim 59, further comprising:

an assignor for assigning a group to at least one of said plurality of stations, and wherein said transmitter is for transmitting said group assignment to said at least one of said plurality of stations (FIG. 8 and [0046]).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jianye Wu whose telephone number is (571)270-1665. The examiner can normally be reached on Monday to Thursday, 8am to 7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571)272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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/Jianye Wu/  
Examiner, Art Unit 2416

/Kevin C. Harper/  
Primary Examiner, Art Unit 2416